

Claims

- [1] 1. A preparation method for a solid titanium catalyst for olefin polymerization, which comprises the steps of: (1) preparing a magnesium compound solution by dissolving a magnesium halide compound into a mixed solvent of a cyclic ether and one or more of alcohol; (2) preparing a carrier by adding firstly a titanium halide compound having a general formula of $\text{Ti}(\text{OR})_a \text{X}_{(4-a)}$, in which R is an alkyl group having 1-10 carbon atoms, X is a halogen atom and a is an integer of 0-3, to the magnesium compound solution at -10-30 °C, elevating the temperature of the resulted solution or aging it, and then thereto adding secondly the titanium halide compound additionally; (3) preparing a titanium catalyst by reacting the carrier with a titanium compound and an electron donor; and (4) washing the titanium catalyst with hydrocarbon solvent at 40-200 °C.
- [2] 2. The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1, characterized in that the cyclic ether used in the step (1) is tetrahydrofuran or 2-methyltetrahydrofuran, and the one or more of alcohol used in the step (1) is primary or polyhydric alcohol having 2-12 carbon atoms.
- [3] 3. The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1 or 2, characterized in that the molar ratio of the cyclic ether to the one or more of alcohol used in the step (1) is 1:0.1-1:10.
- [4] 4. The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1, characterized in that the molar ratio of the firstly-added titanium halide compound to the mixed solvent of cyclic ether and one or more of alcohol in the step (2) is 1:3.0-1:10.
- [5] 5. The preparation method for a solid titanium catalyst for olefin polymerization according to claim 1, characterized in that the washing of the titanium catalyst is repeated 2-10 times with hydrocarbon solvent at 40-200 °C in the step (4).